

**Southern Nuclear
Operating Company, Inc.**
Post Office Box 1295
Birmingham, Alabama 35201-1295
Tel 205.992.5000



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Docket No.: 50-364

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U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

Joseph M. Farley Nuclear Plant - Unit 2
Eighteenth Maintenance/Refueling Outage
Steam Generator Tube Inspection Report

Ladies and Gentlemen:

In accordance with the requirements of Joseph M. Farley Nuclear Plant Technical Specification 5.6.10, Southern Nuclear Operating Company submits this report of the steam generator tube inspections performed during the Unit 2 eighteenth maintenance/refueling outage (2R18).

This letter contains no NRC commitments. If you have any questions, please advise.

Sincerely,

A handwritten signature in black ink, appearing to read "B. J. George". The signature is stylized and includes a long horizontal flourish at the end.

B. J. George
Manager, Nuclear Licensing

BJG/JLS/phr

Enclosure: 2R18 Steam Generator Tube Inspection Report

cc: Southern Nuclear Operating Company
Mr. J. T. Gasser, Executive Vice President
Mr. J. R. Johnson, Vice President – Plant Farley
Mr. D. H. Jones, Vice President – Engineering
RType: CFA04.054; LC# 14658

U. S. Nuclear Regulatory Commission
Dr. W. D. Travers, Regional Administrator
Ms. K. R. Cotton, NRR Project Manager – Farley
Mr. E. L. Crowe, Senior Resident Inspector – Farley

Joseph M. Farley Nuclear Plant - Unit 2

Enclosure

2R18 Steam Generator Tube Inspection Report

**Joseph M. Farley Nuclear Plant – Unit 2
2R18 Steam Generator Tube Inspection Report**

A. The Scope of Inspections Performed on Each Steam Generator (SG)

The scope for Farley Unit 2 refueling outage 2R18 involved the inspections listed below:

1. $\geq 50\%$ Bobbin (3 SGs)
 - Tubes with history based indications and those that could not be examined full length.
 - Tubes identified with 2R15 dings or dents ≥ 5 volts in straight lengths and U-Bends: 27 tubes in SG A; none in SG B; 1 tube in SG C
 - Tubes identified having a Non-Quantifiable Signal (NQS) in 2R15
 - Straight lengths of Rows 1 and 2
2. + Point (3 SGs)
 - 20% Tube Sheet Hot (TSH) ± 3 inches (selected from tubes that were tested in the 50% bobbin program)
 - 50% of Row 1 and 50% Row 2 U bends
 - Special Interest: + point inspection of any bobbin "I" codes as required
 - All dents and dings (U-bends/ straight length) ≥ 5 volts
 - Locations of foreign objects remaining in the SGs. New Potential Loose Part (PLP) and wear indications were bounded.

B. Active Degradation Mechanisms Found

No active degradation mechanisms were identified.

C. Nondestructive Examination Techniques Utilized for Each Degradation Mechanism

N/A (since no active degradation mechanisms were identified).

D. Location, Orientation (if linear) and Measured sizes (if available) of Service Induced Indications

N/A (since no service induced indications were identified).

E. Number of Tubes Plugged During the Inspection Outage for Each Active Degradation Mechanism

N/A (since no active degradation mechanisms were identified).

F. Total Number and Percentage of Tubes Plugged to Date

None.

**Joseph M. Farley Nuclear Plant – Unit 2
2R18 Steam Generator Tube Inspection Report**

G. Results of Condition Monitoring, Including the Results of Tube Pulls and In-Situ Testing

Based on the Condition Monitoring Evaluation contained in the Condition Monitoring Assessment and Operational Assessment dated April 2007, inspections of tubes in service during Cycles 16, 17, and 18 confirm that they all meet Regulatory Guide 1.121 "Bases for Plugging Degraded PWR Steam Generator Tubes" structural integrity requirements. There were no confirmed indications of tube degradation. Since no degradation mechanisms were detected during the Farley Unit 2 refueling outage 2R18 inspection and no primary to secondary leakage had been observed prior to the end of Cycle 18, the condition monitoring assessment requirements for Farley Unit 2 SG operation were satisfied. No challenges to the Condition Monitoring limits were identified; therefore the Condition Monitoring requirements for the Farley Unit 2 SG tube bundles at end of Cycle 18 are satisfied.